

**RESPONSIVENESS SUMMARY
CONCERNING EPA'S AUGUST 30, 2001
PUBLIC NOTICE PROPOSING SEDIMENT TMDLS
FOR WATERS IN THE STATE OF GEORGIA**

SEDIMENT TMDLS - February 2002 - finalization of Sediment TMDLs for Upper North Oconee River, Lower Middle Oconee River, Upper and Middle Mulberry Creek, Walnut Creek, Little River, Tobesofkee Creek (habitat due to sediment), Tobesofkee Creek (biota due to sediment)

Public Participation Activity Conducted:

On August 30, 2001, EPA Region 4 published an abbreviated public notice in the legal advertising section of the Atlanta Journal Constitution. Additionally, Region 4 mailed copies of a detailed public notice to the Georgia Environmental Protection Division (EPD), the Plaintiffs in the Georgia total maximum daily load (TMDL) lawsuit against EPA (Sierra Club et al. v. John Hankinson et al., Civil Action 1:94-cv-2501-MHS), and persons, identified as potentially interested parties, on a mailing list maintained by Region 4. This public notice requested comments from the public on EPA's proposed TMDLs for a significant number of water quality limited segments in the State of Georgia.

Matters on Which Public Was Consulted:

As a result of settlement negotiations in the Georgia TMDL lawsuit against EPA (Sierra Club et al. v. John Hankinson et al., Civil Action 1:94-cv-2501-MHS), EPA had the following commitment:

“If Georgia fails to propose for public comment by June 30, 2001, TMDLs for each waterbody identified in Georgia's 2000 Section 303(d) list, whether such Section 303(d) list is prepared by Georgia or by EPA, and that is located in the Oconee/Ocmulgee/Altamaha Basins, then EPA shall propose such TMDLs by August 30, 2001. In the event EPA proposed such TMDLs, EPA will establish TMDLs following public notice and comment within a reasonable time, and, where significant comment is not received, expects to establish TMDLs by February 28, 2002, unless Georgia submits and EPA approves such TMDLs prior to EPA establishing such TMDLs.”

The public was consulted on proposed TMDLs for the water quality limited segments in the Oconee, Ocmulgee, and Altamaha Basins of the State of Georgia. The proposed TMDLs are identified in the attached list. EPA Region 4 had received and evaluated water quality-related data and information about these waters and pollutants and had prepared documents supporting the preliminary determinations of these evaluations.

Summary of Public's Comments:

The following persons provided written comments or written request for copies of the proposed TMDL during the public comment period:

1. Alan Hallum, Chief
Georgia Department of Natural Resources
Environmental Protection Division
Water Protection Branch
4220 International Parkway
Suite 101
Atlanta, Georgia 30354
2. Dr. David B. Wenner
The University of Georgia
Franklin College of Arts and Sciences
Department of Geology
Athens, Georgia 30602-2501
3. Kesler T. Roberts, Staff Attorney
Georgia Legal Watch
264 North Jackson Street
Athens, Georgia 30601

COMMENT

TSS from a treatment plant should not be included as a source of sediment. TSS from any biological wastewater treatment facility consist of 98% living microorganisms. Only a small fraction of the TSS will become inert sediment.

Alan Hallum, Chief, Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354.

RESPONSE

Concur, however point source impacts are important during low flows. This assumption is conservative and goes to including an implicit MOS.

COMMENT

Under TMDL assumptions, the TMDL states that no NPDES point sources will be authorized to increase its mass loading of sediment above levels reflected in current water quality based effluent limitations or allowed in the State's General Storm Water Permit. Treatment plants are regulated for TSS, which as discussed above, is not sediment. The way the TMDL is written, if a plant wants to expand it will have to reduce the concentration of TSS it discharges proportionally to its increase inflow. This is not reasonable. It is true that if a municipal treatment plant expands, the secondary growth that may occur may increase sediment in the stream, but this will be covered under watershed assessment/protection plan requirements which are required for anyone expanding.

Alan Hallum, Chief, Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354

RESPONSE

Current water quality based effluent limitations or those allowed in the State's General Storm Water Permit are concentration based therefore an increase in flow will allow an increase in loading but the effluent TSS concentration must not be increased. This change has been made in the final TMDLs.

COMMENT

Tobesofkee Creek - Page (i) - third paragraph - The first sentence reads "Although watershed sediment load reductions are not needed, that appropriate it is recommended that ..." The words that appropriate can be deleted.

Alan Hallum, Chief, Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354

RESPONSE

Concur.

COMMENT

Part 5.1.1 - The William Carter Company is listed as a point source. They have gone out of business. Wording about this can be found in EPA's TMDL for toxicity of a tributary to Tobesofkee Creek.

Alan Hallum, Chief, Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354

RESPONSE

This change will be included.

COMMENT

The commenter indicates in Oconee River several sections are listed for sediment. The TMDL report

argues that all sediment loading is from past historic activities and the current turbidity is the result of migration of in stream sediment from headwater areas. The report concludes that current land use practices do not produce an excessive sediment loading and therefore no change in current activities is needed. This conclusion is entirely derived from modeling studies. The report presents no data supporting its conclusions.

Dr. David B. Wenner, The University of Georgia , Franklin College of Arts and Sciences, Department of Geology, Athens, Georgia 30602-2501

RESPONSE

Concur, but the recommendation is that the existing or future sediment loads from land distributing activities be limited to an allowable annual loading that will not further degrade the system but allow the stream to restore itself. Instream sediment sources will be naturally reduced over time or instream restoration can occur to speed up the process.

COMMENT

The commenter indicates insufficient information is given regarding the selection of TMDL target values in all of the sediment TMDLs. For example, where does the target of 500 tons/sq. mile/year come from the Oconee River Watershed? In the paragraph following the assertion of this target, where does the target of 90 tons/sq. mile/year come from? How do these targets relate to each other? It appears they are targets for sustaining waterbody health in either a regular stream or an impaired stream. What do we have here and what is a regular stream?

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The targets are based on the projected sediment load from a non-impacted stream where the biology is healthy.

COMMENT

The commenter indicates specific information is needed regarding the reference streams used for these TMDLs and more justification is needed for the target values established. The comments of Dr. Todd Rasmussen of the UGA Warness School of Forest Resources, submitted separately, contain explicit calculations of what target loads should be established to reach and maintain water quality standards. We suggest that EPA employ accepted methodology such as that employed by Dr. Rasmussen in developing its sediment TMDLs.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

This methodology is being reviewed and refined through the Georgia Sediment

Technical Advisory Group. Since a final report has not been produced, it was not evaluated for this TMDL. As more information and data are gathered this TMDL can be revised and updated, but as required by the Consent Decree this TMDL must be finalized by February 28, 2001.

COMMENT

The commenter indicates the TMDLs are not expressed as Total Maximum Daily Loads. Annual loads are not appropriate for sediment TMDLs. This is an elemental failure of these TMDLs and establishing them as written will leave them susceptible to legal challenge. Further, some of these attempts to create the illusion of being daily. For example, the Tobesofkee TMDL sets an annual load, but asserts on page 17 that the maximum daily loads for each listed segment were estimated. This is inconsistent and incorrect.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The TMDL contains annual loads, which then can be used to determine the appropriate percent reduction needed from BMPs. Daily loads were also provided for low, mean and high flows information.

COMMENT

The commenter indicates these TMDLs ignore all the efforts of the Technical Advisory Group at the University of Georgia and the advances made in the Stekoa and Chattooga TMDL revisions last spring. It reverts to the unacceptable annual load and makes the incredible claim that no reduction in sediment loading is needed for a stream that is identified as being overloaded with sediment. If there is too much sediment already in the stream from past loadings, how can there be room for more? How can there be no need to at least reduce new loadings?

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The Georgia TAG has not developed a final report. Since a final report has not been produced, it was not evaluated for this TMDL. As more information and data are gathered this TMDL can be revised and updated, but as required by the Consent Decree this TMDL must be finalized by February 28, 2001.

COMMENT

Section 9.4 of the Oconee River Watershed TMDL purports to calculate daily loads, although nowhere before have these daily loads been mentioned in the document. Table 5 that follows is misleading because it purports to represent the actual existing daily loads for the particular streams in this

watershed, but the data were actually derived from the model of the healthy watershed. Additionally, the daily maximums are expressed as tons/day, and one can only assume that these are tons per day on the entire waterbody listed. Nowhere are these daily maximums as the modeled waterbody exists translated into actual measures of total allowable maximum daily load that will allow the stream to attain water quality standards.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

Wording corrections fixed. These are the loads that the watershed must continue to meet to maintain a healthy biological and fishery community.

COMMENT

Section 10.2 of the Oconee River Watershed TMDL includes assumptions that do not provide reasonable assurances that, although each NPDES point source meets current standards, there will not be too many sources permitted so that the overall sediment loading is dramatically increased. There are no real limits created here. It is admirable that EPA recognizes that it will gather data and revise this TMDL in the next round, but the realistic allocations that the Agency is determined to make in Round 2 should have been made for Round 1.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

In order to allocate loads among both nonpoint and point sources, there must be reasonable assurances that nonpoint source reduction will in fact be achieved. Reasonable assurance may include the application or utilization of local ordinances, grant conditions, or other enforcement authorities. For the Ocmulgee River Basin sediment TMDL point source reductions will be achieved through implementation of the State of Georgia General Stormwater Permit. Point sources are a very minor contributor. Nonpoint reductions recommended to meet or maintain the sediment load are: implementation of the Ga. Forestry Practices; implementation of NRCS Conservation Practices; adherence to the Mine Land Practices; adoption of proper road practices; and, mitigation and prevention of stream bank erosion. The TMDL identifies that available grant resources for the various nonpoint source sectors, that can be utilized to implement the necessary control practices to ensure that the sediment reduction targets are met. These resources include Section 319(h) nonpoint sources funds which can be used for

TMDL implementation activities. GAEPD has prioritized 319 grant dollars to target TMDL Implementation activities. The State has set up a TMDL Implementation Planning process which will allow the State to work with Regional Development Centers to implement the necessary controls measures required for the nonpoint sources to meet its applicable load allocation.

COMMENT

The commenter indicates as in previous sediment TMDL attempts, these TMDLs ignore wasteload allocations to construction sites. However, construction sites are point sources and must be included in the WLAs. EPA relies on the faulty assumption that the general permit will somehow take care of these sources and that compliance will naturally follow. This matter has been the subject of repeated comments in the past without resolution or improvement. Consequently, this TMDL lacks any reasonable assurance of protecting the waters and fails to include the minimum required components. EPA's apparent confusion over sediment contributions from land clearing is evidenced by the Oconee TMDL, which refers to construction sites as nonpoint sources. In section 10.1 of the Oconee River Watershed TMDL, the TMDL formula seems to consider the specific permit for Little River outside of the overall wasteload

allocation limit, and also appears to consider only the General Storm Water Permits. If this is the case it is not proper and should be revised.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

Construction sites were not ignored. The Georgia General Storm Water Permit will allow construction sites to meet the TMDLs area weighted loading. The TMDL states that construction activities in the watershed will be conducted in compliance with Georgia's Storm Water General Permit for construction activities, including discharge limitations and monitoring requirements contained in the General Storm Water Permit. Compliance with these permits will lead to sediment loadings from construction sites at or below applicable targets.

COMMENT

The commenter indicates the Tobesofkee TMDL position that no reductions or allocations are needed appears to be based on a comparison of this stream with other streams that reportedly are doing well with a higher loading. However, there is no information about whether those other streams have an existing sediment load comparable to that of Tobesofkee. Additionally, the range for unimpaired is quite large-from 0.2 to over 7 tons/acre/year. In several locations, including page 7, the document states that the current loading is estimated at 2 tons/acre/year, but on page 16 it is given as 0.2 to 0.7 tons/acre/year. Which is correct?

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The range for unimpaired is from 0.2 to over 7 tons/acre/year, EPA choose the average of 3 tons/acre/year as the TMDL target. The existing load from the watershed is estimated at 2 tons/acre/year.

COMMENT

The commenter indicates the Oconee River Watershed TMDL mentions that the sediment problems are due to historic land use practices and migration of sediment from the headwater areas via tributaries. However, there are no data to show that those land use practices have ceased or that the sediment loadings from the tributaries are no longer a concern for the Oconee River Watershed. Appendix A even notes that since there were few data available for this watershed, the model chosen to predict current nonpoint source sediment contributions was one taken from surrounding watersheds not specifically named. How can any allocation be made based on this scant information?

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

In the Georgia Piedmont, steep slopes, erodible soils, and intense rainfall combined with the land clearing and agricultural practices of the late nineteenth and early twentieth centuries led to accelerated erosion and sedimentation. Streams that once ran clear over small rocky channels (Bartram, 1928) now run turbid through large entrenched channels over mostly sediment covered bottoms. Sediment delivery rates to streams have decreased significantly since the late nineteenth and early twentieth centuries. Previously cultivated areas have been largely reforested and soil conservation practices have greatly improved. Consequently, channel erosion and expansion through (historical) unstable deposits of modern sediments is quite common in many areas of the Piedmont. Headwater channels that had previously undergone intense sedimentation were being degraded by 1969 while the distribution in the streams has changed during the last century. (Ruhlman and Nutter 1999). Sediment that had aggraded, due to past practices, in the headwater streams is now moving down the stream system into the lower order streams, until this sediment is moved completely out of the stream system a habitat and biological impact will be seen.

COMMENT

Please explain the emphasis on the Phase 2 TMDL for sediment for the Oconee River Watershed. It is our understanding that all TMDLs are to be revised in the face of new data and information, and that the agencies are mandated to collect all readily available information and data on impaired waterbodies. The sediment TAG is on the verge of presenting its final findings. It seems that revisions to the TMDL

should be made in light of that, and not five years from now as the TMDL suggests. We appreciate that EPA is eager to revisit this sediment problem, but we do not find it unique and we do find it necessary.
Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The TMDL phased approach was geared toward developing phase 2 in conjunction with the Georgia River Basin Planning Process and the Georgia monitoring cycle. TMDLs for the Oconee Basin need to be revisited in 2006. Again, if new information and data are present, the TMDL can be developed whenever appropriate, taking into consideration the Statewide priority, workload and available resources.

COMMENT

The commenter indicates section 9.2 of the Oconee River Watershed TMDL notes that the average annual load addresses seasonal variation, but since the TMDL is supposed to be expressed in terms of a total maximum daily load, seasonal variations are important to note, and that crucial parameter is missing from this document.

RESPONSE

TMDLs can be expressed in the appropriate measures. This TMDL contains both annual loads, which then can be used to determine the appropriate percent reduction needed from BMPs, and daily loads. The annual average sediment load and recommended percent reduction is an appropriate target for the biological habitat issue.

COMMENT

The commenter indicates the values used in the TMDLs often seem to be incorrect or are not sufficiently explained. The most striking example of this is in the Tobesofkee document, which shows an existing daily maximum load of 8,900 tons/day and an annual load of 2.0 tons/acre/year. Is there a mis-match of time units? If not, the daily load with a watershed size of 85 sq. miles, with 604 acres/sq. Mile is 54,400 acres, and with 365 days/year, the resulting load is 59.7 tons/acre/year.
Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The 8,900 tons/day is the maximum load that can occur during a high flow event. The flow verses sediment equation was used to calculate the maximum load from the

allowable annual average load. The calculation is not 365 days times maximum load, but is based on the power equation: $TSS (mg/l) = \text{coefficient} * (\text{Flow} / \text{Mean Flow}) ^{0.8}$

COMMENT

The commenter indicates the use of various units to express the same measures is confusing and misleading. This is particularly troubling because conversions are not made. The use of tons/acre/year together alongside tons/sq. mile/year and tons/sq. mile/year is very confusing. One ton/acre/day is equal to 233,600 tons/sq. mile/year. One ton/acre/year is equal to 640 tons/sq. mile/year. Using these units alongside one another provides no basis for comparison. Examples of this exist in all of the sediment TMDLs. See, 5.1.1 of the Oconee River Watershed TMDL.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

Concur and units will be taken into consideration.

COMMENT

The commenter indicates the Oconee River Watershed document states that the contribution of construction activities at .1 tons/acre/year is less than 1% of the target of .9 tons/acre/year of loading into the watershed; however, the math is wrong, and .1 is actually 11% of .9.

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

Correct, document has been updated. Note this is an area weighted load and the stormwater construction permits are requiring a discharge of 11% of the allowable area weighted load. But note this is 89% reduction from area weighted loadings that provide the least impacted biological condition and a suitable habitat.

COMMENT

The commenter indicates these TMDLs do not contain reasonable assurance that they lead to the achievement of water quality standards. For example, the entire Oconee River Watershed TMDL is set up to allow the stream to purge itself over time, but no temporary limits on additional loadings are considered in order to achieve compliance with water quality standards at any reasonably expedient rate. In section 8.1 of the Oconee River Watershed TMDL, EPA notes that biologically unimpacted streams in the Oconee River Basin were used to develop a target sediment watershed load. This TMDL was not done for the specific waters, nor was the TMDL done with an eye toward the current

impairment. The working hypothesis... is that if the [water] has a long-term annual sediment load similar to a relatively biologically unimpacted healthy stream, then [it] will remain stable... Yet, how can a stream that is not stable remain stable? How can historical problems be addressed without acknowledging their existence in the water?

Kesler T. Roberts, Staff Attorney, Georgia Legal Watch, 264 North Jackson Street, Athens, Georgia 30601

RESPONSE

The existence of historic problems is acknowledged in the TMDL. Erosion and sedimentation are naturally occurring cyclical processes that have taken place on a continuous basis in many regions of the U.S. In the Georgia Piedmont, steep slopes, erodible soils, and intense rainfall combined with the land clearing and agricultural practices of the late nineteenth and early twentieth centuries led to accelerated erosion and sedimentation. Streams that once ran clear over small rocky channels (Bartram, 1928) now run turbid through large entrenched channels over mostly sediment covered bottoms. Sediment delivery rates to streams have decreased significantly since the late nineteenth and early twentieth centuries. Previously cultivated areas have been largely reforested and soil conservation practices have greatly improved. Consequently, channel erosion and expansion through (historical) unstable deposits of modern sediments is quite common in many areas of the Piedmont. Headwater channels that had previously undergone intense sedimentation were being degraded by 1969 while the distribution in the streams have changed during the last century. (Ruhlman and Nutter 1999). Sediment that had aggraded, due to past practices, in the headwater streams is now moving down the stream system into the lower order streams, until this sediment is moved completely out of the stream system a habitat and biological impact will be seen.